

MTS-3181US

- 2 -

Sub F3
16 said first fixed wall disposed adjacent to said first ink pressure chamber
17 and said second fixed wall disposed adjacent to said second ink pressure
18 chamber,

19 the piezoelectric block is an integrally sintered one piece block structure,
20 and

21 surfaces of the two electrodes are oriented perpendicular to the thickness
22 direction, the driving portion is polarized in the thickness direction and
23 perpendicular to the surfaces of the electrodes.

Sub F3
1 81. (As Amended) An ink-jet recording head comprising at least one
2 piezoelectric block having (a) first and second ink pressure chambers, each
3 pressure chamber communicating with a nozzle for ejecting ink supplied from an
4 ink supply, (b) first and second partition walls, each partition wall serving as a
5 driving portion for one of the two ink pressure chambers, each partition wall
6 including a piezoelectric element and at least two electrodes for driving said
7 piezoelectric element, (c) a pressure buffer chamber, and (d) first and second
8 fixed walls,

9 wherein at least one of said electrodes is embedded in said partition wall
10 for controlling, by bending of the embedded electrode, whether said partition wall
11 bends toward a side of said ink pressure chamber, or bends toward a side of said
12 pressure buffer chamber,

13 the first ink pressure chamber, the first partition wall, said pressure buffer
14 chamber, the second partition wall and the second ink pressure chamber are
15 arranged in sequence along a thickness direction of said piezoelectric block,

16 said first fixed wall disposed adjacent to said first ink pressure chamber
17 and said second fixed wall disposed adjacent to said second ink pressure
18 chamber, and

19 surfaces of the two electrodes are oriented perpendicular to the thickness
20 direction, the driving portion is polarized in the thickness direction and
21 perpendicular to the surfaces of the electrodes.